



November 2014

[T. Herchline, Editor](#)

LOCAL NEWS

ID Fellows

Dr. Katelyn Booher will be at Miami Valley Hospital in November-December and the VA Medical Center in January. Dr Shruti Patel will be at the VA Medical Center in November-December and at Miami Valley Hospital January.

Local Disease Activity

Public Health - Dayton & Montgomery County Environmental Health was notified in late October of approximately 30 ill persons who attended a wedding reception in Miamisburg. Symptoms included vomiting and diarrhea. The caterer was out of Cincinnati. Cincinnati Health Department initiated contact with the caterer and inspection of the facility. EH interviewed both well and sick wedding guests. Approximately 50 people were interviewed. Stool specimens were collected from ill persons. Leftover food was also collected. Results were positive for Norovirus.

An 18 year old woman was diagnosed with Salmonella in early September. She was subsequently determined to work in a sensitive occupation (bagger at grocery store). She completed a course of therapy and returned to work after her symptoms resolved.

There were three individuals reported with Legionnaires' disease during September. Each of these cases was considered sporadic. Two cases were reported from the VA Medical Center in October. Both were considered nosocomial (health care-associated). The VA Medical Center is directing the on-campus investigation.

NATIONAL NEWS

Contributed by Katelyn Booher, DO

On September 30, 2014, the CDC confirmed the first case of Ebola in the United States; the patient had just flown from Liberia to the U.S., and ultimately died October 8, 2014. On October 10th, a nurse who had cared for the index patient tested positive for Ebola, and received care at NIH. She recovered and was discharged October 24th. On October 15, a second healthcare worker who cared for the index patient also tested positive for Ebola, and received treatment at Emory Hospital. She recovered and was discharged October 28th. Finally, on October 23rd, a case of Ebola was confirmed in a medical aid worker with Doctors Without Borders. The patient remains in isolation in a New York City hospital while investigations continue.

An outbreak of enterovirus D68 (EV-D68) has occurred throughout the U.S. over the last several months. This is associated with a severe respiratory illness. From mid-August until now, 1,105 people in 47 states and the District of Columbia were confirmed to have respiratory illness due to EV-D68. September 12, 2014, a cluster of pediatric cases in Colorado developed facial drooping, muscle weakness, paralysis, and other neurologic symptoms. Imaging showed spinal cord lesions. Nine total children were involved, 4 had nasal samples showing enterovirus D68, and one rhinovirus. The CDC has announced that cerebrospinal fluid samples were negative for enterovirus, and it remains unclear whether enterovirus was linked to this cluster of cases.

INTERNATIONAL NEWS

WHO provided updated guidelines regarding personal protective equipment (PPE) for the Ebola response. Experts agree that PPE most importantly should protect mucosa, mouth, nose, and eyes from contaminated droplets and fluids. In addition to face cover, protective foot wear, gowns and coveralls, and head covers, hand hygiene and gloves remain essential. It has been noted that further work is needed to understand why some healthcare workers have become infected.

Ebola virus disease (EVD) was reported in Mali for the first time ever on October 23, 2014. A 2-year-old female developed symptoms while in Guinea only a few days prior to diagnosis, and traveled via road to Mali. The patient was admitted to a healthcare facility in Mali October 20, 2014, and unfortunately died October 24, 2014. 85 contacts have been identified and are being followed.

Twelve additional cases of Middle East respiratory syndrome coronavirus (MERS-CoV), including five deaths, have been reported to WHO between October 18-26, 2014. The cases are from Taif (6), Riyadh (4), Madinah (1), and Skaka (1). None of the cases had a history of contact with camels or consumption of raw camel products. Two of the patients did reside in areas densely populated with camels. None of the cases had performed Uhrah/Hajj in the two week period preceding the illness. Contact precautions and eye protection should be added to standard and droplet precautions when caring for probable or confirmed cases of MERS-CoV infection; airborne precautions should be applied when performing aerosol generating procedures.

Case Conference

Contributed by Shruti Patel, MD

A 62 year old Congolese refugee arrived in Dayton one month prior to presenting to the MVH ER with chief complains of cough and hemoptysis for 4 days. Patient also reported pleuritic chest pain, subjective fever and weight loss for unknown duration. He had chronic arthralgias in his elbows, shoulders, and wrist. He ate mainly a plant-based diet and water source was from a nearby well while living in Burundi. He denied eating sea food or swimming in rivers. Vital signs were normal. Physical exam revealed reduced air entry in all lung fields. Abdomen was tender in epigastric and left upper quadrant areas. A 1cm hyperpigmented tender macular lesion on his left shin of tibia was present. Lab data showed WBC of 10,600 with marked eosinophilia (28.7%). His IgE was mildly elevated to 338. His HIV test was non-reactive. Chest X-ray showed bilateral nodular densities. CT scan of chest was obtained and showed only the multiple bilateral nodules. Bronchoscopy was done; BAL specimen obtained did not reveal any bacteria, parasites or malignant cells. PET scan was done and that showed nodules in lung were most likely infectious etiology. Patient was T spot positive and tuberculosis was suspected. Patient was started on anti-tuberculosis treatment while cultures were pending. Final cultures did not grow any mycobacteria. Multiple parasite antibodies were sent to evaluate for eosinophilic pneumonia. Paragonimus westeramini IGG antibody was positive supporting a diagnosis of Paragonimus infection.

Discussion

Paragonimus belongs to Trematode group. Paragonimiasis is endemic in areas of South East Asia and Africa. In USA, only 15 cases had been recorded since 1994. Humans are definitive hosts for Paragonimus. Infections are acquired by ingestion of raw or undercooked crabs and crayfish, which are intermediate hosts. Clinical features include acute gastrointestinal symptoms following ingestion. Chronic pleuropulmonary paragonimiasis causes cough, hemoptysis, pleuritic chest pain, fever and pleural effusion. It can mimic Tuberculosis. Diagnosis is done by detection of eggs from sputum, feces, BAL specimen, or with antibody detection. Detection of antibody with ELISA or immunoblot assay is very sensitive and highly specific. Drug of choice for treatment is praziquantel. This patient was treated with praziquantel 25 mg/kg/day TID for three days.

References

- Toscano C, et al. Paragonimiasis and tuberculosis - diagnostic confusion : a review of the literature. WHO Technical Documents, Geneva, Switzerland 1994. Available at: <http://apps.who.int/iris/handle/10665/59147>.
- Barrientos MA, Carrasco AU. Images in clinical medicine - Paragonimiasis. N Engl J Med 2012; 366:165.
- Aka NA, et al. Human paragonimiasis in Africa. Ann Afr Med 2008; 7:153-62

Bug of the Quarter

Contributed by: W. Grant Starrett, M.D.

This article reviews the more obscure organisms which are less commonly isolated in clinical specimens and are often considered contaminants or colonizers. Please contact me at wgstarrett@premierhealth.com if you come across an isolate that may fit in this category.

Organism: *Cryptococcus uniguttulatus*

Clinical Data:

A 60 year-old male with history of diabetes mellitus was transferred from an outlying hospital following an admission for right foot cellulitis and atrial fibrillation. His right great toe became tender and swollen and did not respond to trimethoprim/sulfamethoxazole and cephalexin prescribed as an outpatient. A toe abscess was aspirated at the outlying hospital and cultures grew Group B streptococcus and methicillin susceptible *staphylococcus aureus* (MSSA). Ceftriaxone was switched to nafcillin and the patient underwent amputation of his great toe. Cultures grew Group B streptococcus, *Streptococcus lugdunensis* (methicillin susceptible), *Peptococcus prevotii* and *Cryptococcus uniguttulatus*. The patient went on to have a transmetatarsal amputation two days later and surgical cultures were negative. He was ultimately discharged off of antibiotics but has since had multiple infectious complications over the last two years including a non-healing right foot surgical wound and MSSA bacteremia associated with sternal osteomyelitis and parasternal abscess. He is currently doing well on chronic antibiotic suppression with cephalexin.

Taxonomy:

Family: Sporidiobolaceae

Genus: *Cryptococcus* (*Filobasidiella*/*Filobasidium*)

Species: *uniguttulatus*

Associated Diseases:

1. Ventriculitis and meningitis (*C. uniguttulatus*)
2. fungemia in cancer patients (*C. albidus* and *C. laurentii*)
3. other CNS and eye infections (*C. albidus* and *C. laurentii*)

Description:

Cryptococcus spp are widespread in the environment and are found in soil, plants, avian guano, and even food. These dimorphic fungi are found primarily in the yeast form in both the environment and the host, and the mycelial form is called *Filobasidiella*/*Filobasidium* following mating. *Cryptococcus neoformans* is the only major pathogen. Human infections caused by non-*neoformans* *Cryptococcus* are rare but have been described for several, particularly *C. albidus* and *C. laurentii*. Ventriculitis and meningitis due to *Cryptococcus uniguttulatus* have been documented. Interestingly, neither was considered immunocompromised, but one had undergone an intracranial vascular procedure. Virtually all *Cryptococcus* species are characterized by a large capsule, and species are differentiated primarily by cultural and biochemical characteristics. This isolate was considered a contaminant in our patient, and he was not treated.

Resources:

1. McCurdy LH, *et al.* Ventriculitis due to *Cryptococcus uniguttulatus*. South Med J. 2001;94(1):65-6.
2. Murray, *et al.* Manual of Clinical Microbiology, 7th edition.
3. Weihua P, *et al.* Meningitis caused by *Filobasidium uniguttulatum*: case report and overview of the literature. Mycoses. 2011; 55(2):105-109.
4. www.doctorfungus.org

Upcoming Events

November 2014

2-6	American Society of Tropical Medicine & Hygiene	New Orleans, LA
12	Journal Club	MVH 6NW
	Case Conference (Cancelled)	

December 2014

10	Journal Club	MVH 6NW
	Case Conference (Cancelled)	

January 2015

14	Journal Club	MVH 6NW
28	Case Conference	MVH Maxon Parlor

February 2015

11	Journal Club	MVH 6NW
23-26	Conference on Retroviruses and Opportunistic Infections	Boston, MA
25	Case Conference	MVH Maxon Parlor

March 2015

11	Journal Club	MVH 6NW
25	Case Conference	MVH Maxon Parlor

April 2015

8	Journal Club	MVH 6NW
25-28	European Congress of Clin Micro & Inf Dis	Copenhagen, Denmark
29	Case Conference	MVH Maxon Parlor
30-5/2	ACP Internal Medicine 2015	Boston, MA

May 2015

13	Journal Club	MVH 6NW
27	Case Conference	MVH Maxon Parlor

June 2015

4-6	Refugee Health Conference	Toronto, Canada
10	Journal Club	MVH 6NW
24	Case Conference	MVH Maxon Parlor

July 2015

8	Journal Club	MVH 6NW
29	Case Conference	MVH Maxon Parlor

August 2015

12	Journal Club	MVH 6NW
26	Case Conference	MVH Maxon Parlor